Guidelines For Estimating

Weaner Pig (Nursery) Costs 5 - 23 kg

Based on marketing 35,308 pigs

Date: March, 2007

This publication is intended to provide a format and a set of guidelines for determining the cost of production for a weaner pig 5-23 kg enterprise. This type of operation is intended to represent the second stage, or nursery, of a three stage pork system. The three production stages are as follows: first stage - farrow to 5 kg, second stage - weaner pig (nursery) 5 to 23 kg, third stage - grower/finisher 23 kg to market weight. Adjustments will be necessary when applying these figures to your enterprise.

The assumptions on which the costs are based are outlined in the supporting pages. These assumptions were arrived at using the breeding stock, management practices, and facilities seen in modern, well managed swine operations of comparable size in Manitoba. Productivity and performance assumptions are based on information collected by department specialists, feed companies and other organizations. Where individual herd productivity and performance levels differ from those listed adjustments will be required.

Accurate, up to date, production and financial records are essential for the effective application of these guidelines to an individual operation. Without such information accurate cost of production projections cannot be determined.

Disclaimer: This budget is only a guide and is not intended as an in depth study of the cost of production of this industry. Interpretation and utilization of this information is the responsibility of the user. If you require assistance with developing your individual budget, please contact your local MAFRI office.

Weaner Pig (Nursery) Costs 5-23 kg Cost of Production

The following farrow wean cost of production budget is **based on the assumption that all feed is purchased.**

The budget also includes a land investment cost based on the assumption that 160 acres would be required for this size of operation, with 140 acres being rented out at $25 per acre.

If developing a cost of production budget to include home mixed rations the following items should be added to the budget:

- additional equipment costs associated with a mix mill;
- additional bins for different ingredients;
- additional labour for feed preparation.

The rations illustrated in this budget are examples only. Individual farm conditions should be taken into account when formulating the diets. Producers need to know what the feed intakes of their animals are. Please consult with a nutritionist for diet formulations suggestions.

The Manitoba pork production industry profile is changing and this budget was specifically designed to address the need of producers who may want to analyze the cost of starting up or switching to a swine nursery 5-23 kg operation. Several companies are offering contracts with varying levels of guarantees. Producers need to accurately calculate their costs before they can properly make a decision.

Weaner Pig (Nursery) 5-23 kg Summary
March, 2007

	$/Pig Sold	Total Cost	Your Cost
A. Operating Costs			
1. Feed Costs:			
1.01 Pre Starter 1	$1.56	$55,080	
1.02 Pre Starter 2	$2.60	$91,801	
1.03 Starter 1	$4.59	$162,064	
1.04 Starter 2	$5.10	$180,071	
Total Feed Cost	**$13.85**	**$489,016**	
2. Other Operating Costs:			
2.01 Weanling cost	$36.19	$1,277,797	
2.02 Veterinary Medicine & Supplies	$0.40	$14,100	
2.03 Maintenance & Repairs	$0.14	$4,943	
2.04 Hydro & Propane	$1.98	$70,000	
2.05 Insurance	$0.26	$9,180	
2.06 Manure Costs	$0.47	$16,480	
2.07 Office Supplies	$0.04	$1,560	
2.08 Levy, Marketing & Transportation	$3.24	$114,398	
2.09 Property Taxes	$0.19	$6,615	
Subtotal Operating Costs	$56.76	$2,004,089	
2.10 Interest on Operating Cost	$0.40	$14,123	
Total Operating Costs	**$57.16**	**$2,018,212**	
B. Fixed Costs			
3. Depreciation:			
3.01 Buildings and Manure Storage	$0.73	$25,775	
3.02 Equipment	$1.08	$38,133	
Total Depreciation Cost	$1.81	$63,907	
4. Investment:			
4.01 Land Cost	$0.05	$1,600	
4.02 Buildings and Manure Storage	$0.35	$12,358	
4.03 Equipment	$0.26	$9,180	
Total Investment Cost	$0.66	$23,138	
Total Fixed Costs	**$2.47**	**$87,045**	
C. Labour			
Wages, benefits and hired manager	$1.38	$48,725	
Total Cost of Production	**$61.01**	**$2,153,982**	

Break-Even Price	$/Pig	
Operating Cost	$57.16	
Operating & Labour Cost	$58.54	
Operating Labour & Fixed Cost	$61.01	

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Weaner Pig (Nursery) Production Costs 5-23 kg

1. This input table outlines the cost of production for the weaner barn only.
2. Buildings and equipment are valued at new cost.
3. Manure haulage is contracted out.

Herd Profile

Weaner Pig Places	**5,200**		
Number of turns	**7**		
Weaner Pigs Purchased	**36,400**		
Percent Post-Weaning Mortality	**3.0**		
Pigs Died, Post-Weaning	**1,092**		
Weaner Pigs Sold	**35,308**		
Average Market Price	**$65.80** /cwt	$145.06	/ckg
Weanling Formula Factor (% of Mkt Price)	**55.00** %		
Calculated Weanling Puchase Price	$36.19 /pig		

Feed Requirements

			Ration Cost	
			Purchased	**Home-Mixed**
Pre Starter 1(sew)	**1.3**	kg/pig	**$1,200.00**	$0.00 /tonne
Pre Starter 2	**2.8**	kg/pig	**$927.00**	$0.00 /tonne
Starter 1	**9.0**	kg/pig	**$510.00**	$0.00 /tonne
Starter 2	**15.0**	kg/pig	**$340.00**	$0.00 /tonne
Total Feed	**28.1**	kg/pig		

Weaner Pig Efficiency

Days Weaner on feed (nursery)	**42**	days
Total Cycle Days (per turn)	**52**	days
Target Starting Weight	**5.0**	kg
Target Ending Weight	**23.0**	kg
Feed Conversion Ratio (feed:gain)	**1.56**	kg
Average Daily Gain	**0.43**	kg

Labour

Total Hours per 7-day week	**67.0**	hours/week
Wage (includes benefits & hired manager)	**$14.00**	/hour

Capital Investment

		$/Sq. Ft.	$/Pig Place	Total	Your Cost
Buildings					
Barn	10,400 sq ft	**$48.00**	$96.00	$499,200	
Office & loading				**$5,000**	
Feed Mill (building only)				**$0**	
Total Building Cost				**$504,200**	
Equipment					
Nursery barn				**$310,000**	
Generator				**$13,000**	
Electrical & other				**$90,000**	
Fire Alarm System				**$1,000**	
Feed Bins				**$11,000**	
Ingredient Bins				**$0**	
Total Equipment Cost				**$425,000**	
Total Buildings and Equipment Cost			**$178.69**	**$929,200**	
Land Value					
Land Investment	20 acres @	$500		**$10,000**	
Other Costs					
Site preparation				**$30,000**	
Manure Storage				**$35,000**	
Total Other Costs				**$65,000**	
Total Capital Investment			$193.12	**$1,004,200**	

Feed Ingredient Costs

Ingredients	Price/tonne	Your Cost
Wheat	$170	
Barley	$160	
Corn	$170	
Soybean Meal - 47 %	$280	
Canola Meal - 34%	$175	
Peas	$210	
Creep Premix	$1,200	
Sow Micro Premix	$3,000	
Grower Micro Premix	$2,500	
Canola Oil	$900	
Whey Powder	$800	
Herring Meal	$1,500	
Plasma	$7,500	
Limestone	$80	
Dical (16% Ca-21% P)	$455	
Salt - 96%	$125	
Phytase	$10,000	
L-Lysine HCL	$2,200	
L-Threonine	$2,600	
D,L-Methionine	$3,600	
Oats - Steam rolled	$400	
Processing Cost (Hydro & Repairs/Maintenance & Insurance)	$3.25	
Percent Weight loss due to processing	1.25 %	
Labour	$4.00	

	Suggested Home Mixed Rations			
	Pre starter 1	Pre starter 2	Starter 1	Starter 2
	(kg)	(kg)	(kg)	(kg)
Wheat	106.00	134.50	400.00	407.60
Barley	0.00	0.00	0.00	65.00
Corn	0.00	0.00	0.00	250.00
Soybean Meal - 47 %	120.00	130.00	223.00	227.00
Canola Meal - 34%	0.00	0.00	204.50	0.00
Peas	0.00	0.00	0.00	0.00
Creep Premix	0.00	0.00	0.00	0.00
Sow Micro Premix	5.00	5.00	5.00	5.00
Grower Micro Premix	0.00	0.00	0.00	0.00
Canola Oil	27.00	19.00	11.30	0.00
Whey Powder	121.00	125.00	90.70	0.00
Herring Meal	61.00	75.00	45.50	25.00
Plasma	59.00	0.00	0.00	0.00
Limestone	12.50	12.50	7.00	7.00
Dical (16% Ca-21% P)	10.00	10.00	8.00	8.00
Salt - 96%	3.50	3.50	3.50	3.50
Phytase	0.00	0.00	0.50	0.50
L-Lysine HCL	0.50	0.50	1.00	1.40
L-Threonine	0.00	0.00	0.00	0.00
D,L-Methionine	0.00	0.00	0.00	0.00
Oats - Steam rolled	474.50	485.00	0.00	0.00
Total must equal 1000 kg	1,000.00	1,000.00	1,000.00	1,000.00

Feed Requirement and Cost Summary

	Amount		Price		Ration Cost	Your
Pre starter 1	(kg)		$ /tonne		$ /tonne	Cost
Wheat	106.0		$170.00		$18.02	
Soybean Meal - 47 %	120.0		$280.00		$33.60	
Sow Micro Premix	5.0		$3,000.00		$15.00	
Canola Oil	27.0		$900.00		$24.30	
Whey Powder	121.0		$800.00		$96.80	
Herring Meal	61.0		$1,500.00		$91.50	
Plasma	59.0		$7,500.00		$442.50	
Limestone	12.5		$80.00		$1.00	
Dical (16% Ca-21% P)	10.0		$455.00		$4.55	
Salt - 96%	3.5		$125.00		$0.44	
L-Lysine HCL	0.5		$2,200.00		$1.10	
Oats - Steam rolled	474.5		$400.00		$189.80	
Total Pre Starter 1	**1,000.0**	**kg**			**$918.61**	
Adjusted for weight loss (percentage)			1.25	%	$930.09	
Plus processing cost per tonne			$3.25		$933.34	
Plus Labour Cost			$4.00		**$937.34**	
Pre starter 2						
Wheat	134.5		$170.00		$22.87	
Soybean Meal - 47 %	130.0		$280.00		$36.40	
Sow Micro Premix	5.0		$3,000.00		$15.00	
Canola Oil	19.0		$900.00		$17.10	
Whey Powder	125.0		$800.00		$100.00	
Herring Meal	75.0		$1,500.00		$112.50	
Limestone	12.5		$80.00		$1.00	
Dical (16% Ca-21% P)	10.0		$455.00		$4.55	
Salt - 96%	3.5		$125.00		$0.44	
L-Lysine HCL	0.5		$2,200.00		$1.10	
Oats - Steam rolled	485.0		$400.00		$194.00	
Total Pre Starter 2	**1,000.0**	**kg**			**$504.96**	
Adjusted for weight loss (percentage)			1.25	%	$511.27	
Plus processing cost per tonne			$3.25		$514.52	
Plus Labour Cost			$4.00		**$518.52**	

Starter 1

Wheat	400.0	$170.00	$68.00	
Soybean Meal - 47 %	223.0	$280.00	$62.44	
Canola Meal - 34%	204.5	$175.00	$35.79	
Sow Micro Premix	5.0	$3,000.00	$15.00	
Canola Oil	11.3	$900.00	$10.17	
Whey Powder	90.7	$800.00	$72.56	
Herring Meal	45.5	$1,500.00	$68.25	
Limestone	7.0	$80.00	$0.56	
Dical (16% Ca-21% P)	8.0	$455.00	$3.64	
Salt - 96%	3.5	$125.00	$0.44	
Phytase	0.5	$10,000.00	$5.00	
L-Lysine HCL	1.0	$2,200.00	$2.20	
Total Starter 1	**1,000.0 kg**		**$344.05**	
Adjusted for weight loss (percentage)		1.25 %	$348.35	
Plus processing cost per tonne		$3.25	$351.60	
Plus Labour Cost		$4.00	**$355.60**	

Starter 2

Wheat	407.6	$170.00	$69.29	
Barley	65.0	$160.00	$10.40	
Corn	250.0	$170.00	$42.50	
Soybean Meal - 47 %	227.0	$280.00	$63.56	
Sow Micro Premix	5.0	$3,000.00	$15.00	
Herring Meal	25.0	$1,500.00	$37.50	
Limestone	7.0	$80.00	$0.56	
Dical (16% Ca-21% P)	8.0	$455.00	$3.64	
Salt - 96%	3.5	$125.00	$0.44	
Phytase	0.5	$10,000.00	$5.00	
L-Lysine HCL	1.4	$2,200.00	$3.08	
Total Starter 2	**1,000.0 kg**		**$250.97**	
Adjusted for weight loss (percentage)		1.25 %	$254.11	
Plus processing cost per tonne		$3.25	$257.36	
Plus Labour Cost		$4.00	**$261.36**	

Weaner Pig (Nursery) 5-23kg Production Costs Worksheet

A. Operating Costs

1. Feed Requirements and Costs

			Your Cost
1.01 Pre starter 1			
	1.30	kg ration/pig	
x	$1,200.00	/tonne	
÷	1,000	kg/tonne	
=	**$1.56**	**/pig sold**	
1.02 Pre starter 2			
	2.8	kg ration/pig	
x	$927.00	/tonne	
÷	1,000	kg/tonne	
=	**$2.60**	**/pig sold**	
1.03 Starter 1			
	9.0	kg ration/pig	
x	$510.00	/tonne	
÷	1,000	kg/tonne	
=	**$4.59**	**/pig sold**	
1.04 Starter 2			
	15.0	kg ration/pig	
x	$340.00	/tonne	
÷	1,000	kg/tonne	
=	**$5.10**	**/pig sold**	

2. Other Operating Costs

2.01 Weanling Purchase			
	$65.80	$/cwt average market price	
x	55.00	% of mkt price weanling formula factor	
	$36.19	**purchase cost**	
2.02 Veterinary Medicine & Supplies			
	$3,600	professional services	
+	$10,500	medication	
÷	35,308	pigs sold	
=	**$0.40**	**/pig sold**	

2.03 Maintenance & Repairs

	$929,200	building & equipment cost
x	0.55	% year repair & maintenance
÷	35,308	pigs sold
=	**$0.14**	**/pig sold**

2.04 Hydro & Propane

	$30,000	hydro
+	$40,000	propane
÷	35,308	pigs sold
=	**$1.98**	**/pig sold**

2.05 Insurance

	$929,200	investment
x	$0.65	rate/$100
÷	100	/$100 capital
÷	35,308	pigs sold
=	$0.17	/pig sold
	$286,000	market hogs value
x	$0.65	/$100 capital invested
÷	35,308	pigs sold
=	$0.05	/pig sold
	$45.00	business interruption coverage/feeder
x	5,200	feeders
x	$0.65	/$100 capital invested
÷	35,308	pigs sold
=	$0.04	/pig sold
Total =	**$0.26**	**/pig sold**

2.06 Manure Costs

Haulage	2.4	litres/pig/day
x	365	days
x	$0.002	/litre
x	5,200	pig places
÷	35,308	pigs sold
=	$0.26	/pig sold

Odour control & Mgmt Fees

	$7,300	total cost	
+	35,308	pigs sold	
=	$0.21	/pig sold	
Total =	**$0.47**	**/pig sold**	

2.07 Office Supplies

	$0.30	/pig place	
	$5,200	pig places	
+	35,308	pigs sold	
=	$0.04	**/pig sold**	

2.08 Levy, Marketing & Transportation

	$3.00	trucking in	
+	$0.19	council levy	
+	$0.05	insurance	
=	**$3.24**	**/pig sold**	

2.09 Property Taxes

	$6,615	total taxes	
+	35,308	pigs sold	
=	**$0.19**	**/pig sold**	

2.10 Interest on Operating Cost:

	$36.19	weaner cost	
+	$20.57	subtotal operating	
÷	2	average	
x	52	days per turn	
÷	365	days per year	
x	6.00	% operating interest	
=	**$0.40**	**/pig sold**	

B. Fixed Costs

3. Depreciation: $\frac{\text{Original cost - Salvage Value}}{\text{Useful Life}}$

3.01 Buildings

	$569,200	building cost (including manure storage)	_____
-	$50,420	salvage value (building only)	_____
÷	20	years useful life	_____
÷	35,308	pigs sold	_____
=	**$0.73**	**/pig sold**	_____

3.02 Equipment

	$425,000	equipment cost	_____
-	$42,500	salvage value	_____
÷	10	years useful life	_____
÷	35,308	pigs sold	_____
=	**$1.08**	**/pig sold**	_____

4. Investment: $\frac{\text{Original Cost + Salvage Value}}{2}$ **x Investment Rate**

4.01 Land

	$10,000	land value	_____
+	$30,000	site preparation	_____
x	4.0	% investment rate	_____
÷	35,308	pigs sold	_____
=	**$0.05**	**/pig sold**	_____

4.02 Buildings

	$569,200	building cost (including manure storage)	_____
+	$50,420	salvage value (building only)	_____
÷	2	average	_____
x	4.0	% investment rate	_____
÷	35,308	pigs sold	_____
=	**$0.35**	**/pig sold**	_____

4.03 Equipment

	$425,000	equipment cost	
+	$42,500	salvage value	_____
÷	2	average	_____
x	4.0	% investment rate	_____
÷	35,308	pigs sold	_____
=	**$0.26**	**/pig sold**	_____

C. Labour

	67.0	hours/week	
x	52	weeks/year	_____
x	$14.00	/hour	_____
÷	35,308	pigs sold	_____
=	**$1.38**	**/pig sold**	_____

Summary of Home Mixed Feed Ingredients Used

Total pigs sold **35,308**

	Total per Year (tonnes)	Total per Month (tonnes)	Total per Pig (kgs)	Total per Pig (lbs)
Wheat	0.0	0.00	0.0	0.0
Barley	0.0	0.00	0.0	0.0
Corn	0.0	0.00	0.0	0.0
Soybean Meal - 47 %	0.0	0.00	0.0	0.0
Canola Meal - 34%	0.0	0.00	0.0	0.0
Peas	0.0	0.00	0.0	0.0
Creep Premix	0.0	0.00	0.0	0.0
Sow Micro Premix	0.0	0.00	0.0	0.0
Grower Micro Premix	0.0	0.00	0.0	0.0
Canola Oil	0.0	0.00	0.0	0.0
Whey Powder	0.0	0.00	0.0	0.0
Herring Meal	0.0	0.00	0.0	0.0
Plasma	0.0	0.00	0.0	0.0
Limestone	0.0	0.00	0.0	0.0
Dical (16% Ca-21% P)	0.0	0.00	0.0	0.0
Salt - 96%	0.0	0.00	0.0	0.0
Phytase	0.0	0.00	0.0	0.0
L-Lysine HCL	0.0	0.00	0.0	0.0
L-Threonine	0.0	0.00	0.0	0.0
D,L-Methionine	0.0	0.00	0.0	0.0
Oats - Steam rolled	0.0	0.00	0.0	0.0
Total	**0.0**	**0.0**	**0.0**	**0.0**

Summary of Purchased Feed Ingredients Used

	Total per Pig Mkt (kgs)	Total per Year (tonnes)	Total per Month (tonnes)	Total per Pig Mkt (lbs)
Pre starter 1	1.3	47.3	3.9	3.0
Pre starter 2	2.9	101.9	8.5	6.4
Starter 1	9.3	327.6	27.3	20.5
Starter 2	15.5	546.0	45.5	34.1
Total	**29.0**	**1,022.8**	**85.2**	**63.9**
Total	**29.0**	**1,022.8**	**85.2**	**63.9**

For further information contact your local MAFRI office.

Prepared by:
Peter Blawat
Policy Analyst

Ian Seddon
Business Development Specialist - Swine

Prepared by Manitoba Agriculture, Food and Rural Initiatives.